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ABSTRACT

The relationship between interpersonal problem-solving training and behavioral adjustment was examined for 54 black, low-income preschool children. Pre- and post-testing was done with two interpersonal problem-solving measures designed by Shure and Spivack, Shure and Spivack's Hahnemann Preschool Behavior Rating Scale which classroom teachers were asked to complete for each child, and the Sharp Behavior Identification Checklist which was used to observe the children in small play groups. The children's scores on the behavior rating scale were used to classify children as adjusted, inhibited, or impulsive. Following preliminary analyses of pre-test data, children were assigned to one of three conditions. The problem-solving training condition consisted of interpersonal cognitive problem-solving training exactly as set down by Shure and Spivack. The modified problem-solving training condition employed Shure and Spivack's lessons with the exception of the first twelve on prerequisite language skills. In the attention placebo control condition, the children received a general cognitive enrichment program stressing language and number concepts. Children within each condition met in small groups with their trainer outside the classroom for 15-20 minutes a day for a total of 44 days. The findings suggest that problem-solving training does not mediate improvement in preschoolers' behavioral adjustment whether one uses teachers' ratings or independent observations of the children's behavior. (JMB)

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Impact of Interpersonal Problem-Solving Training on Preschooler's Behavioral Adjustment

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The research I'm presenting today examines an aspect of socialization we in developmental psychology have just recently begun attending to -- social competency in the very young child. In particular, it examines the relationship between two components of social competency -- problem-solving thinking and the overall level of positive behavioral adjustment (i.e., the absence of extreme levels of shy-withdrawn or aggressive behaviors).

There is a belief that a child's ability to think through and solve interpersonal problems increases the likelihood of his or her optimal functioning. There is an assumption made by cognitive-behavior modification theorists that intervention on the cognitive level will effect a change on the behavioral level (e.g., Meichenbaum, 1977). The question this research addresses is the feasibility of such a model with very young children.

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Shure and Spivack (1972, 1973) designed an intervention program aimed at improving preschooler's problem-solving skills with the hopes that such training would result in an increase in behavioral adjustment. They report success in improving both cognitive skills and behavioral adjustment. Their conclusion is that cognitive problem-solving is a direct mediator of behavioral adjustment.

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While their results are impressive, some caution is warranted given previous investigators' findings suggesting the lack of an intimate relationship between thought and behavior in the very young child. A critical examination of Shure and Spivack's methodology reveals a potential source of contamination. Their only measure of behavioral adjustment, and thus their only measure of the impact of training on behavior, has been teachers' ratings, and these same teachers are used as trainers in the intervention program. Teachers' awareness of the program content and the experimental treatment of the children may have contaminated the results.

Given the importance of the issue Shure and Spivack have raised, i.e., the feasibility of cognitive- behavior modification programs to increase social competency in very young children, the present study was designed to examine this issue using a design which corrects for previous methodological flaws. (1) Classroom teachers were not used as trainers and were therefore kept unaware of the program goals and experimental treatment of the children, and (2) children's behavior was observed by independent observers as well as rated by classroom teachers.

Sample

Subjects were 54 black, low-income children, who attended one of two Title I preschools in the Detroit public school system (mean age of 4.5 years).

Procedure

Four types of information were obtained for each child at pretest

and posttest. The two problem-solving measures were designed by Shure and Spivack. (1) The Preschool Interpersonal Problem-Solving (PIPS) Test measured the child's ability to conceptualize alternative solutions to two types of real-life problems: (a) how to get a chance to play with a toy another child has and (b) how to avert mother's anger after damaging her property. (2) The What Happens Next Game (WHNG) Test measured the child's ability to conceptualize alternative consequences to two types of problems: (a) what would happen after one child grabs a toy from another and (b) what would happen after a child took an object from an adult's house without asking. The child's scores consisted of the number of different alternatives and consequences given.

There were also behavioral measures. (1) Classroom teachers were asked to complete Shure and Spivack's Hahnemann Preschool Behavior Rating Scale (PBS) for each child. This scale consists of seven items (e.g., persistent and nagging, easily upset, physically aggressive) which load on three factors: impatience, emotionality and aggression. Based on the child's score on these factors, each child was classified into one of three behavioral groups: adjusted, inhibited or impulsive. (2) Children were observed in small plays groups, each consisting of two boys and two girls. The Sharp Behavior Identification Checklist, consisting of 21 behaviors, was devised specifically for this aspect of the study. Behaviors on the checklist are consistent with items on Shure and Spivack's rating scale. Each child was observed three times, fifteen minutes each time, on three nonconsecutive days. Using a combination of time-and event-sampling, all behaviors on the checklist

observed in each ten-second interval were recorded. Inter-observer agreement across behaviors was established at 86.7%.

Following preliminary analyses of pretest data, children were randomly assigned to one of three conditions, subject to the three constraints of equating groups on (a) mean pretest problem-solving test scores, (b) sex composition, and (c) behavioral adjustment composition. The three conditions were problem-solving training, modified problem-solving training and attention placebo control. The training group received Shure and Spivack's training as exactly set down in their program manual (1974). The modified training group received Shure and Spivack's lessons with the exception of the first twelve on prerequisite language skills. This condition was included to examine the relative importance of these lessons. The attention placebo control received a general cognitive enrichment program stressing language and number concepts, modelled after the program used by Rickel, Smith and Sharp (1979). There were no similarities between this program and Shure and Spivack's. The primary purpose of this condition was to maintain the naivete of teachers, as all the children were receiving special attention outside the classroom.

Children within each condition met in small groups with their trainer outside the classroom for 15-20 minutes a day for a total of 44 days. Posttesting followed the same procedure as pretesting immediately after completion of intervention.

Results

Looking at the impact of training on problem-solving test scores,

a 2 x 3 analysis of variance (aberrant/adjusted x experimental condition) on difference scores showed the "aberrant" children who received training increased their number of alternative solutions generated on the PIPS Test significantly more than those "aberrant" children in the control group (F (2,53) = 6.03, p .005). A similar analysis revealed no significant training effect on the number of alternative consequences generated on the WHNG Test. These results are consistent with Shure and Spivack's and demonstrate our success in replicating their training program.

Looking at the impact of training on behavior, teachers' ratings of behavioral adjustment were first used. A McNemar change test revealed no significant difference between the number of trained children who showed a positive change in behavior (pretest aberrant to posttest adjusted) and the number who showed a negative change (pretest adjusted to posttest impulsive) (X^2 (1) = 0.308). Exploring Shure and Spivack's claim that children who improve in behavior generate a larger number of alternatives on the PIPS Test than those who remain aberrant, a t test revealed no significant difference for the present study (t (13) = 0.996). These results suggest the training program did not have an ameliorative effect on the children's behavioral adjustment.

To check the validity of these findings, we also examined the impact of training on behavior using observational data. Observation data was first reduced using a hierarchical clustering scheme (Johnson, 1967;

Weiss, 1970). Three clusters emerged: aggression, dominance and general activity. A 2 x 2 x 3 analysis of variance (aberrant/adjusted x sex x experimental condition) on observation scores for each cluster revealed no significant training effects on behavior.

Thus, the results of the present investigation suggest that problem-solving training does not mediate improvement in preschooler's behavioral adjustment, whether one uses teachers' ratings or independent observations of the children's behavior.

Conclusions

While the present findings do not support Shure and Spivack's position that there is an intimate relationship between behavioral adjustment and the ability to think through and solve interpersonal problems, they are consistent with findings of other researchers investigating the relationship between thought and behavior in the very young child. Kendler and Kendler (1962) and Luria (1961) suggest that the verbal response represents one chain of habits and behavior another. For very young children the two chains are parallel and therefore do not interact. Therefore, teaching very young children to generate a larger number of alternative solutions to interpersonal problems does not lead to their usage of more adaptive behavior when attempting to solve their natural occurring interpersonal problems. These findings are suggest that if our goal is to change social competency behavior of the very young child, perhaps a behavioral intervention program is needed.

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